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Residue of pharmacologically active substances in plant-based food

BfR opinion No 051/2011 of 2 November 2011

Veterinary medicinal products are used in livestock farming in order to both prevent illness and treat sick animals. Food derived from treated animals can therefore contain residues of pharmacologically active substances. Even in the excretions of treated animals such residues can, under certain circumstances, be detected. Through the use of liquid and solid manure, these residues can reach areas used for agricultural purposes. The BfR has analysed the currently available data on the existence of residues of pharmacologically active substances in plants.

A search of the literature showed that transfer of pharmacologically active substances into plants is possible in principle. The findings for 22 pharmacological substances were above the relevant analytical quantification limit. For the most part, the tested substances are antibiotics widely used in veterinary medicine.

As regards the evaluated studies, it must be borne in mind that they are typically based on worst-case scenarios. In addition, the studies hardly ever take into account the whole transfer path of the treatment and excretions of animals (liquid and solid manure), to the soil and absorption by the plants.

As early as December 2009, the BfR held a discussion with experts on the problem of veterinary medicine residues in plants. The results of this expert discussion are summarised in the following document: BfR information No. 019/2010 of 15 February 2010: “Residues of Veterinary Medicines in Plants”

The full version of the BfR Information in German is available on http://www.bfr.bund.de/cm/343/rueckstaende-pharmakologisch-wirksamer-stoffe-in-lebensmitteln-pflanzlichen-ursprungs.pdf